

REMARKS

A petition for a one month extension of time has today been filed as a separate paper and a copy is attached hereto.

New claims 14 – 17 find corresponding description at page 13, lines 19-22 of applicant's specification. New claim 18 depends from claim 9 but otherwise is like amended claim 8.

A substitute abstract is submitted herewith, as requested by the examiner. The substitute abstract contains no new matter.

The undersigned thanks Examiners Bennett and Lueke for their time and courtesy in the interview of December 21, 2006.

Responsive to the objection to the drawings, two "replacement sheets" are submitted herewith. As explained at the interview, the new drawing sheet for Figs 3(a)-3(c) shows the bottom surface of the substrate 11 (Figs 3(a) and 3(b)) as one example of a "base plane" as defined at page 6, lines 8-15 of applicant's specification and the bottom surface of the film 12 (Fig. 3(c)) as another example of the "base plane". As further explained at the interview, θ_{ave} is an average of absolute values for slope that cannot be shown in the drawings other than by graphical representation, for example, as in Fig. 6.

As agreed in the interview, in claims 2 and 5 the terminology "refraction index" has been replaced with the more conventional terminology "refractive index", also used in applicant's specification at page 4, line 21.

The claims have also been amended responsive to the objections set forth at the bottom of page 3 of the office action and to the rejection for indefiniteness as set forth at page 4 of the office action. At the interview the undersigned noted that claims 2 and 5 do define "n" as the "refraction index", now "refractive index". The undersigned believes, on the basis of remarks made at the interview, that the examiners are now satisfied with the clarity of the claims per the proposed amendments now formally presented here.

At the interview the prior art approaches to redirection to the front of light introduced at the edge of a light control film in a backlight, as summarized pages 1-3 of applicant's specification, were briefly discussed. The undersigned noted that the Masaki

et al reference, which the examiner applies in rejecting applicant's claims for obviousness, is representative of the conventional approach embodying "regularly arranged protrusions" acknowledged by applicant at page 1, last line to page 2, line 5 and page 2, lines 14-24, of his specification. As applicant notes in those teachings, such sheets with "regularly arranged protrusions" suffer from the problems of relatively high expense and likelihood of generating "interference patterns, thus causing glare and poor visibility when this film is used alone" and other problems when used in combination with light diffusion sheets.

On the other hand, prior art films having "an irregularly uneven surface" tend to produce uneven luminance and glare over the entire film surface. See page 2, line 25 to page 3, line 2 of applicant's specification.

The presently claimed invention combines the advantages of both of the above prior art approaches, while minimizing their shortcomings, by incorporating the light directionality of a film having "regularly arranged protrusions", such as disclosed in the examiner's Masaki et al reference, into a film wherein the light emergent surface has irregular unevenness. That the claimed film concentrates light to within a desirably small angle to the desired direction to the front was explained with reference to Fig. 6 of applicant's drawings.

At the interview, the undersigned also explained that the pending claims require that substantially any and all cross-sections through the film have a profile curve at the uneven surface with an average for the absolute value of slope within the recited range and, further, it is readily apparent that the film of Masaki et al will have numerous cross-sections where the average absolute for slope will be zero degrees, as exemplified by B-B' and D-D' on the attached copy of Figs. 1A and 1B of Masaki et al. Accordingly, Masaki et al is not suggestive of and does not render obvious the invention as claimed.

Independent Claims 2 and 5

At the interview Lueke questioned the relationship between refractive index n and the present invention. The answer is that the applicant discovered that the desired, improved effects of his invention could be further enhanced by taking into account the

refractive index in designing the surface unevenness. This is explained at page 18, lines 11-26 of applicant's specification where he concludes:

"By designing the geometry of the rough surface pattern by taking the refraction index of the material composing the rough surface pattern into account, the luminance towards the front can be further improved."

Here, it suffices to note that the prior art in no way suggests such a design in a light control film.

Claims 7, 8, 9 and 13

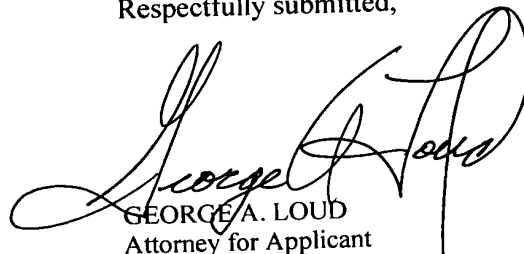
These claims were explained with reference to Figs. 11 and 12 of the drawings. Examiner Lueke expressed the opinion that a further search would produce prior art disclosing the features additionally recited by these claims.

In conclusion, it is respectfully requested that the examiner reconsider the rejections of record with a view toward allowance of the pending claims as amended.

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Date: December 26, 2006

Respectfully submitted,



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